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Memorandum

From: Steve Willis
To: Wayne Miller
Date: October 25, 2018
Subject: Site visit to inspect the landfill cap at Former Williams Air Force Base Site LF004, September 25, 2018.

Mr. Miller:

On September 25, 2018 ADEQ and UXO Pro conducted a site visit to the Former Williams Air Force Base to accompany AMEC personnel on the annual inspection of the Site LF004 landfill cap. The inspection was conducted to observe the current status of features identified during previous inspections and check for any changes in site conditions.

The following descriptions refer to the photographs in Attachment 2. Photograph locations are identified in Attachment 1.

- Photo 1. Fissuring on previously repaired berm along the south side of the treatment lagoon at the west end of the landfill.
- Photo 2. Marking the location of an apparent new fissure near the west end of the landfill cover.
- Photo 3. Erosion beneath south boundary fence near the west end of the landfill.
- Photo 4. Minor erosion near the southwest landfill boundary.
- Photo 5. Possible animal burrow or erosional feature near the southwest end of the landfill.
- Photo 6. Fissures on top of landfill cap, center-west area of cap, southwest of well LF01-W07. This fissure appears to be a new feature.
- Photo 7. Fissure on the east edge of the well MW-7 access pad. This may be continuous from the fissure shown in Photo 6
- Photo 8. Fissures on top of landfill cap, center area of cap east of well MW-07
- Photo 9. Settlement area associated with fissures near the north-central part of the landfill cap.

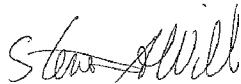
- Photo 10. Erosion under fence near previously repaired area on the north side of the landfill.
- Photo 11. Possible animal burrow at base of the slope on the north side of the landfill.
- Photos 12 and 13. Fissuring at the edge of the north interceptor trench.
- Photo 14. Erosion or animal burrowing beneath the east landfill boundary fence.
- Photo 15. Erosional rills on the east side of the landfill.

In general, there appeared to be more fissures in the cap than during the 2017 inspection, including several apparent new fissures or extensions of previously identified fissures (see Attachment 1). Much of the fissuring appeared to be minor at this time. Some of the previous repairs were showing signs of failure (e.g., renewed fissuring on the berm along the south side of the treatment lagoon and along the northern interceptor trench). Animal burrowing continues to be an issue, but was similar in extent to the burrows identified in previous inspections. Vegetation on the cap appeared more significant than in recent years.

Amec's field crew placed stakes and flags at each of the significant features (defined as those features, such as fissures, burrows, and erosion, that appeared to exceed 6-inches in depth) to mark the locations for possible repairs.

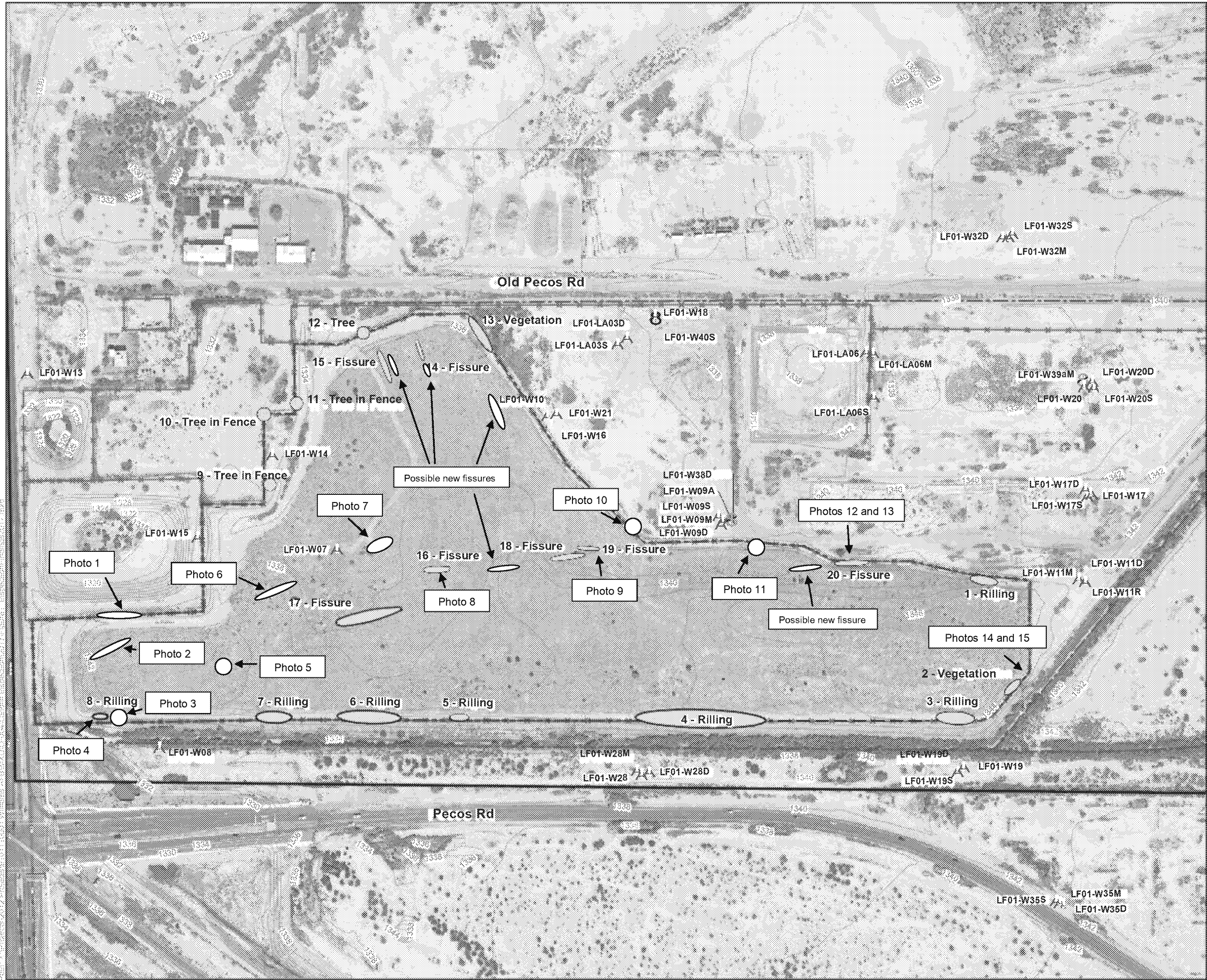
Please contact me if you have comments or questions regarding this memo.

Thank you,

A handwritten signature in cursive script, appearing to read "Steve Will".

**ATTACHMENT 1
LANDFILL FEATURES**

(modified from *Final Annual Landfill Cap Inspection and Maintenance Report, September and October 2017 Events, Site LF004, Former Williams Air Force Base, Mesa, Arizona* (Amec Foster Wheeler Environment & Infrastructure, Inc., July 12, 2018))



Legend

- A Monitoring Well Location
- 8 Observation Well Location
- Inspection Feature
- Drainage Ditch
- Fenceline
- Elevation Contour Line (2-Foot Intervals)
- LF004 Boundary
- Former Williams Air Force Base Boundary

Notes:

LF01-W11M Monitoring Well Identification
(Figure modified for UXO Pro Landfill Cap Inspection
Memo, October 26, 2018)

0 125 250 500
Feet

Annual Landfill Inspection Report
September and October 2017 Events
Site LF004 - Former Williams Air Force Base
Mesa, Arizona

LF004 Landfill Inspection Findings

FIGURE 1	Job No.: 9101110001
	PM: DS
	Date: 1/25/2018
	Scale: 1" = 250'

This map shown here has been created with all due and reasonable care and is strictly for use with Amec Foster Wheeler Project Number 9101110001. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Amec Foster Wheeler assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.



**ATTACHMENT 2
SITE PHOTOS**

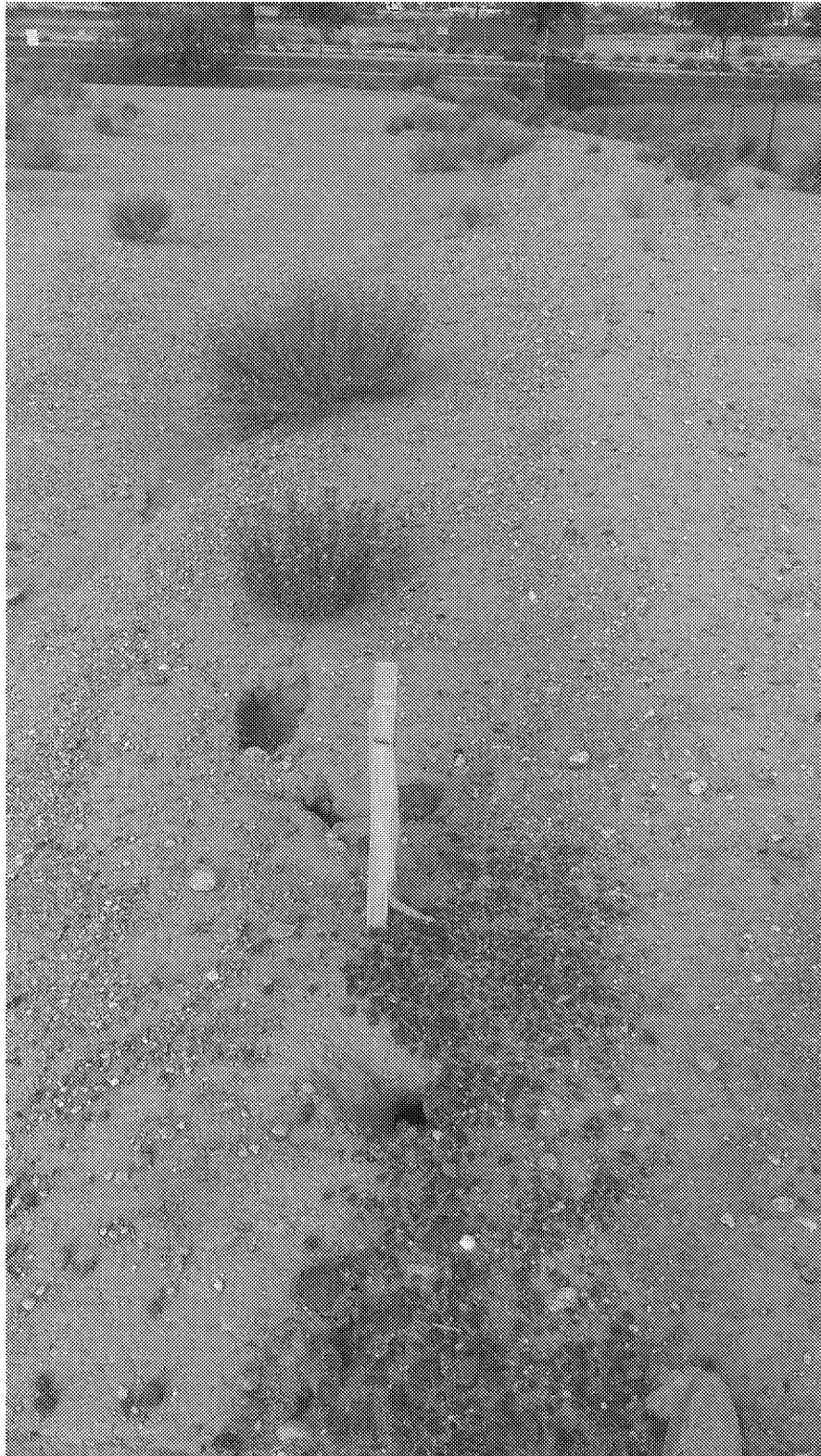


Photo 1. Fissuring on previously repaired berm along the south side of the treatment lagoon at the west end of the landfill.

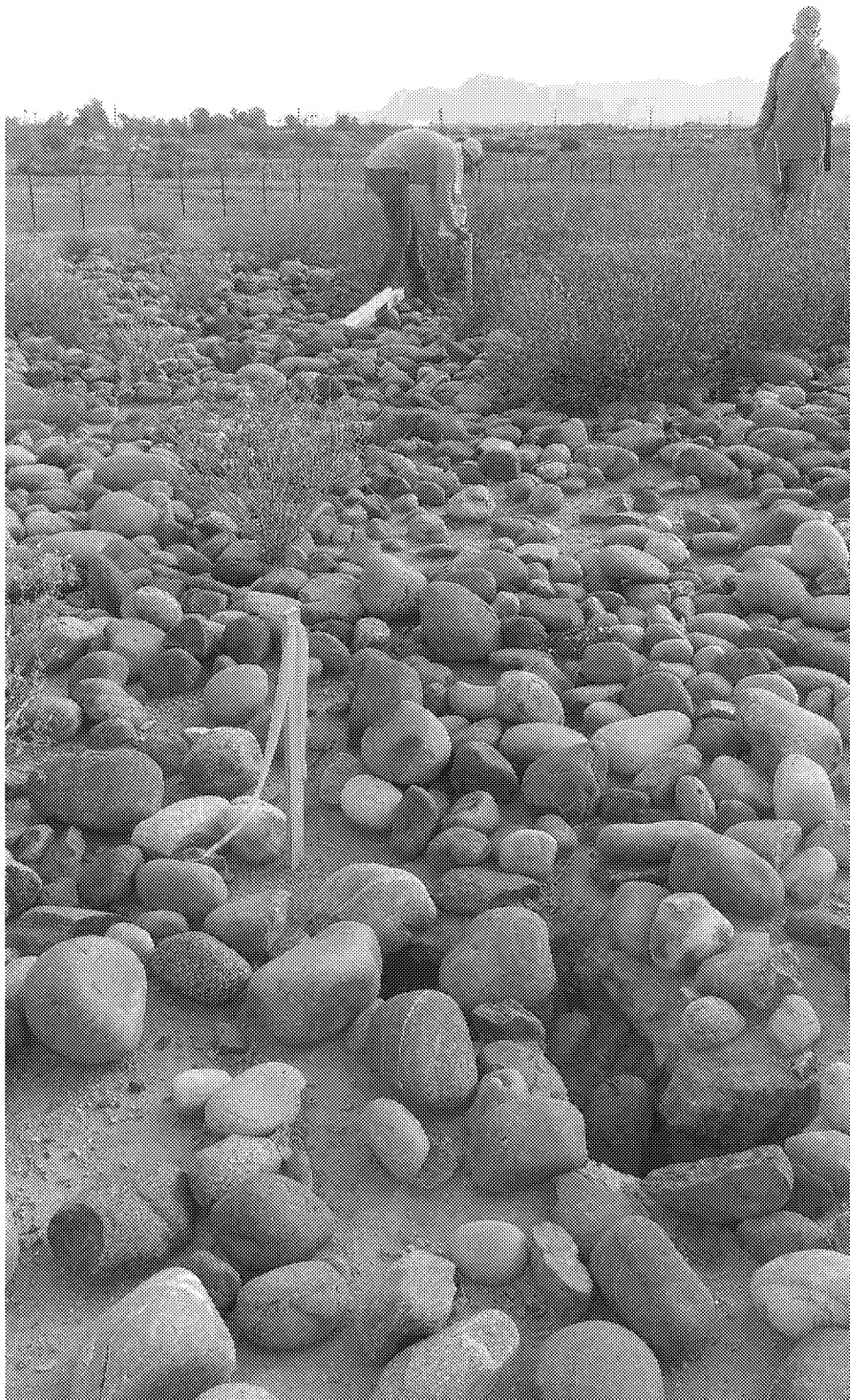


Photo 2. Marking a new fissure in the landfill cover.



Photo 3. Erosion beneath south boundary fence near the west end of the landfill.



Photo 4. Minor erosion near the southwest end of the landfill.



Photo 5. Possible animal burrow or erosional feature near the southwest end of the landfill.

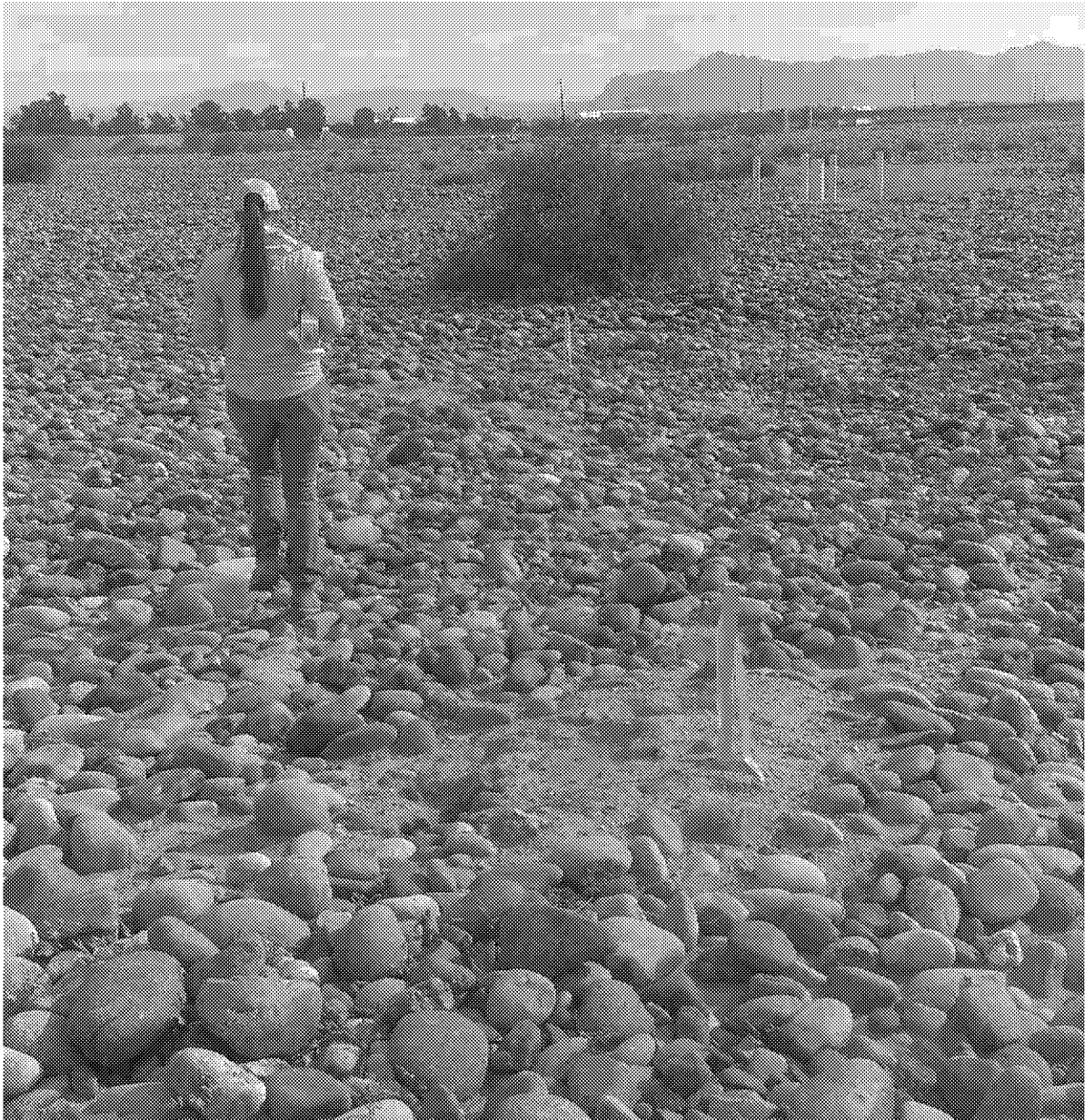


Photo 6. Fissures on top of landfill cap, center-west area of cap. View toward well MW-07.



Photo 7. Fissure on the east edge of the well MW-7 access pad.

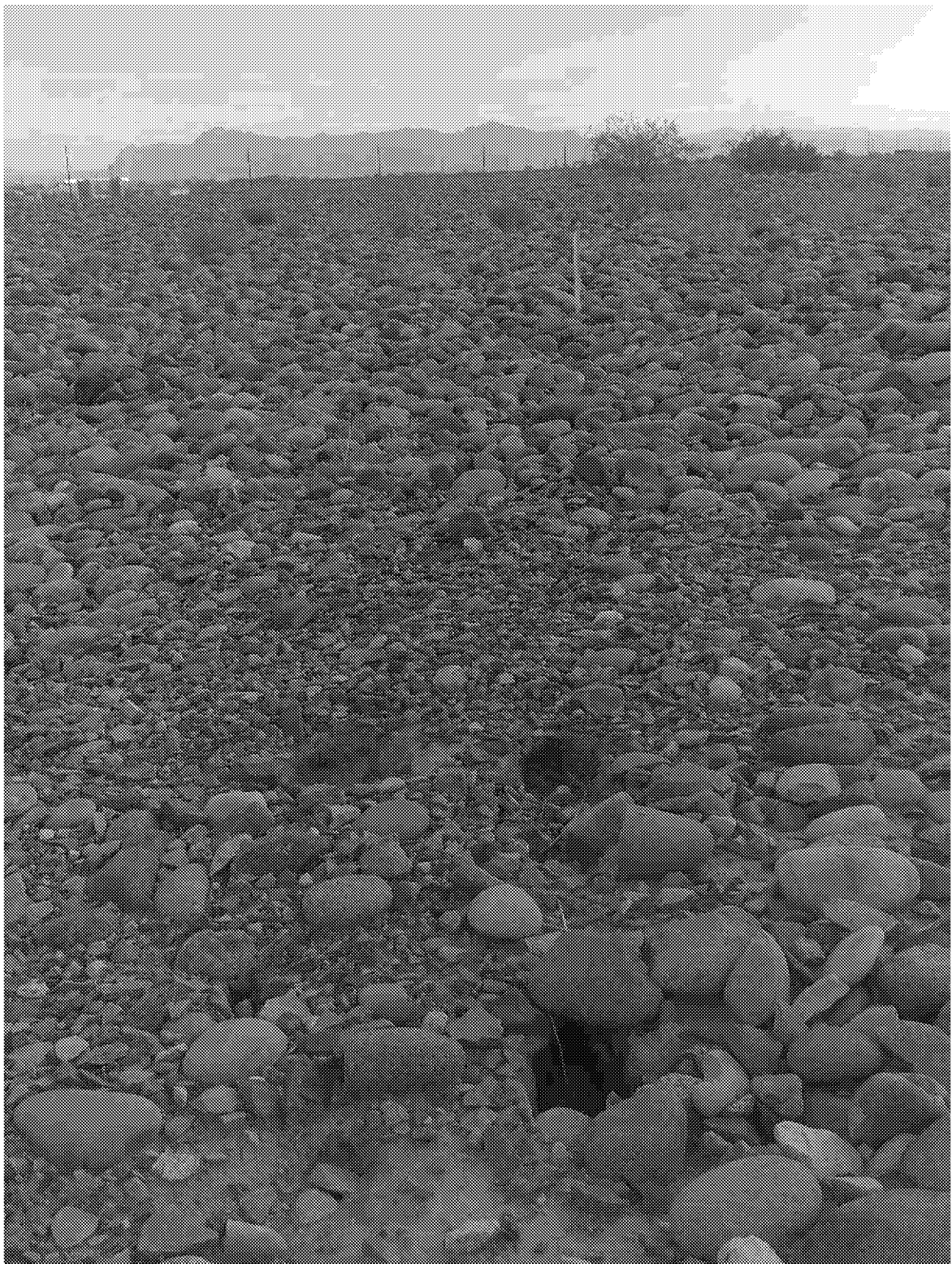


Photo 8. Fissures on top of landfill cap, center area of cap east of well MW-07.



Photo 9. Settlement area on top of landfill cap near the fissure area on the north-central part of the cap.



Photo 10. Erosion under fence near previously repaired area on north side of landfill.



Photo 11. Possible animal burrow at base of slope on north side of landfill.



Photo 12. Fissure in previously repaired area on the north side of the northern drainage trench.



Photo 13. Eastern extent of fissure in previously repaired area on the north side of the northern drainage trench.



Photo 14. Erosion or animal burrowing beneath the east landfill boundary fence.



Photo 15. Erosional rills on the east side of the landfill.